Translational control during hypoxia: consequences for gene expression and hypoxia tolerance

Stellingen
behorende bij het proefschrift

Translational control during hypoxia: consequences for gene expression and hypoxia tolerance

1. Regulation of mRNA translation strongly influences gene expression during hypoxic conditions (this thesis).

2. Global inhibition of mRNA translation paradoxically stimulates translation of specific mRNA transcripts (this thesis).

3. Substantial cross-talk exists between transcriptional programs elicited during hypoxia and translational control (this thesis).

4. The pathways that regulate mRNA translation during hypoxia provide interesting candidate targets for the development of novel anti-cancer drugs (this thesis).

5. Development of new biomarkers for non-invasive imaging is necessary to restrict the most aggressive cancer therapy to patients with the highest risk of failing conventional treatment.

6. As massive amounts of gene expression data continue to be generated using technologies such as microarrays and deep sequencing methods, the need for skilled bioinformaticians as well as the capacity to store all this information increases.

7. The concept of cancer stem cells receives currently great interest. However it remains unknown whether these cancer stem cells are derived from mutations in normal stem cells or from differentiated tumor cells that have acquired the characteristics of stem cells.

8. Cancer research in The Netherlands would likely benefit more from special fundraising events by building community spirit and raising more money than by traditional door-to-door donations.

9. Hypoxic conditions can easily be achieved by sharing 1 office amongst 13 people.

10. 100% of the shots you don't take don't go in (Wayne Gretzky).

Twan van den Beucken, 11 september 2008